

MODULE 4

LOGISTICS

4.1

**Maintenance
Introduction**

4.5

**Preventive
Maintenance**

4.2

**HW/SW
Data Flow**

4.6

**Practical
Exercises**

4.3

**Fault Detection
& Isolation**

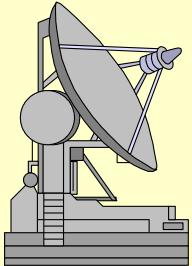
4.4

**Support
Documentation**

Module 4

4-1

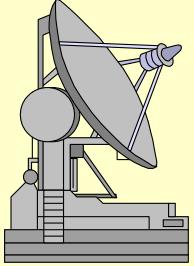




MODULE 4 OBJECTIVES



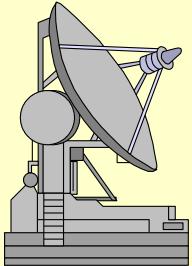
- Using the student materials, class notes, and system manuals, the student will understand the STT logistics support including maintenance concepts, data flow, inter-connectivity, technical manuals, Maintenance Data Collection (MDC) procedures, standard base supply procedures, and Preventive Maintenance Inspections (PMI's).



LESSON 4.1



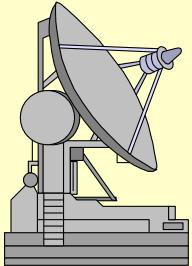
MAINTENANCE INTRODUCTION



LESSON 4.1 OVERVIEW



- This lesson will cover STT:
 - Maintenance Concept
 - Line Replacable Unit (LRU) List
 - Warranty
 - Technical Manuals

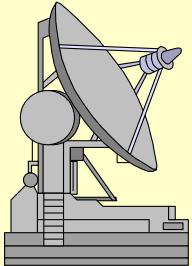


STT

MAINTENANCE CONCEPT



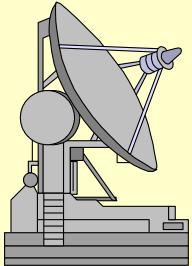
- There are two levels of maintenance
 - » Organizational level
 - » Depot level
- Organizational level maintenance is the responsibility of the “operator/maintainer”, to include:
 - » Reloading the system software
 - » Performing software upgrades
 - » Remove & Replace Line Replaceable Units (LRU's)
 - » Preventative Maintenance Inspection's (PMI's)
- Depot level maintenance is completed on all sub-components of equipment items listed on the LRU lists



LRU LIST PROCESSING EQUIPMENT GROUP



- DAS
- Workstation
 - Hard Disk Drive
- LCD Panel (L-STT) or 17" Monitor (Enhanced STT)
- Peripheral Bay (L-STT)
 - Hard Disk Drive
 - DAT Drive (Enhanced & L-STT)
 - CD-ROM Drive
- Keyboard
- Mouse



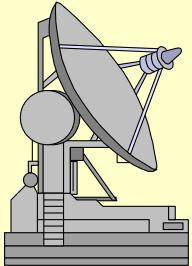
LRU LIST

RF/ANTENNA EQUIPMENT

GROUP



- 2, 3 or 4.6 Ft Tracking antenna
 - Positioner
 - Controller
- WEFAX antenna
- APT antenna
- GPS antenna

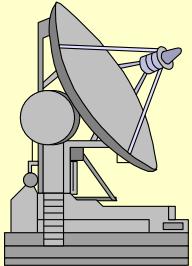


LRU LIST

AUXILIARY EQUIPMENT GROUP



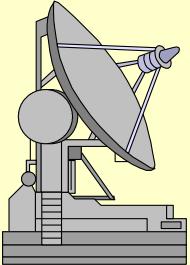
- Printer
- PDA
- Power Inverter
- Signal Monitor
- Cables
- Cases



LRU LIST COMSEC EQUIPMENT GROUP



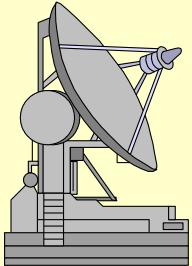
- AN/CYZ-10 DTD's
- KG-144
- MYK-7A



STT WARRANTY



- Warranty is 1 year, starting when the Air Force government representative signs for it. Normally, this is the date it was shipped.
- Verify this date with the WSSC Help Desk via the Item Manager.

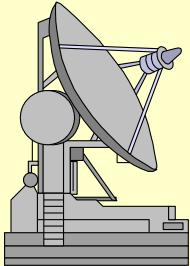


STT TECHNICAL MANUALS



■ Reference materials include:

- Computer System Operations Manual (T.O. 31M3-2TMQ43-41)
- General Systems Manual (T.O. 31M3-2TMQ43-1)
- Fault Isolation Manual (T.O. 31M3-2TMQ43-11)
- Illustrated Parts Breakdown (T.O. 31M3-2TMQ43-4)
- L-STT Systems Manual (T.O. 31M3-2TMQ43-431)
 - » L-STT Only; Contains the GSM, FIM and IPB for the L-STT
- Inspection and Maintenance Requirements Manual (T.O. 31M3-2TMQ43-05)
 - » Inspection and Maintenance Work Cards (T.O. 31M3-2TMQ43-06)
- Work Unit Code Manual (T.O. 31M3-2TMQ43-06)

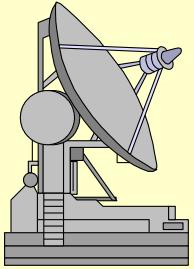


LESSON 4.1 REVIEW



- This lesson topic has covered STT:

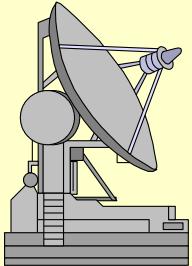
- Maintenance Concept
- Warranty
- LRU List
- Technical Manuals



LESSON 4.2



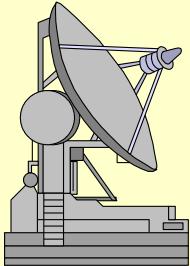
HARDWARE/SOFTWARE DATA FLOW



LESSON 4.2 OVERVIEW



- This lesson will cover STT:
 - Equipment Review
 - System Block Diagram
 - Inter-connectivity



STT EQUIPMENT GROUPS



■ The four major equipment groups:

— RF/Antenna Equipment Group

Includes: GPS Antenna, APT Antenna, WEFAX Antenna, and 2, **3 and 4.6 Ft** Tracking Antenna

— COMSEC Equipment Group

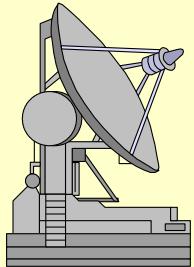
Includes: DTDs, MYK-7A and KG-144

— Processing Equipment Group

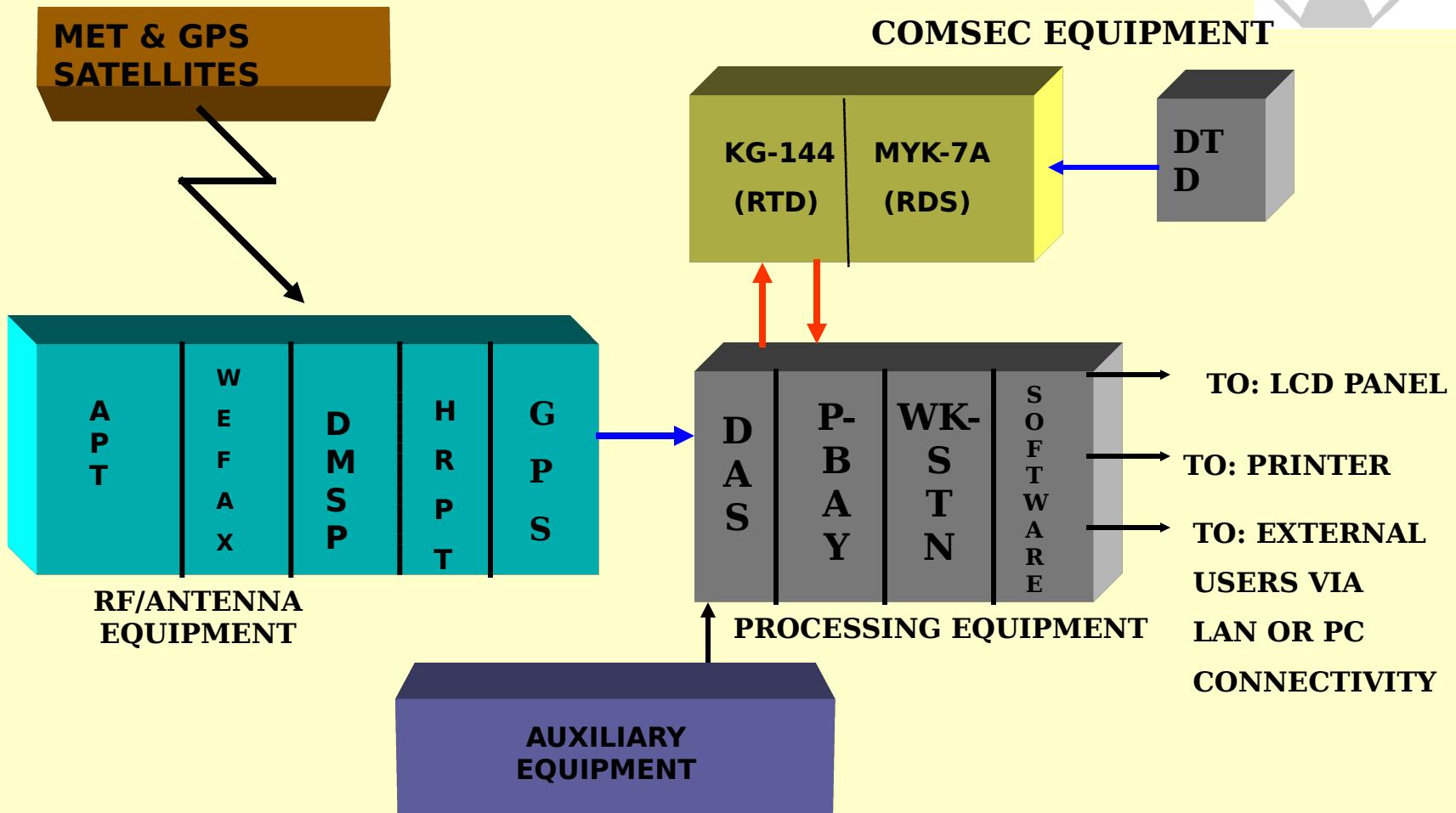
Includes: DAS, Workstation, **Peripheral Bay**, Mouse, **LCD Panel**, External Keyboard, **CD-Rom Drive**, **Monitor** and DAT Drive

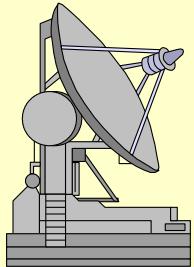
— Auxiliary Equipment Group

Includes: Printer, PDA, Power Inverter, Signal Monitor, Cables and Transit Cases

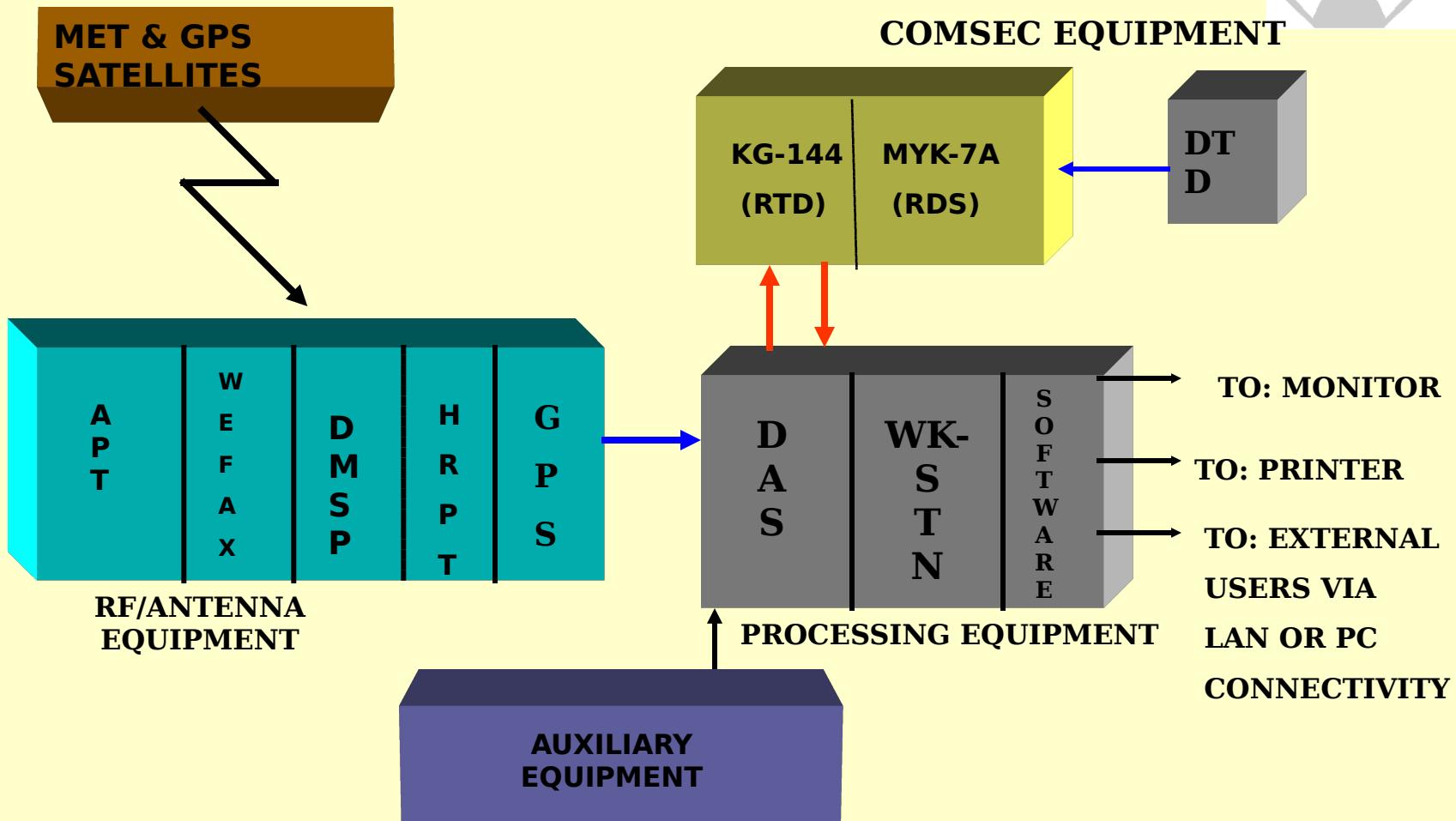


L-STT SYSTEM BLOCK DIAGRAM

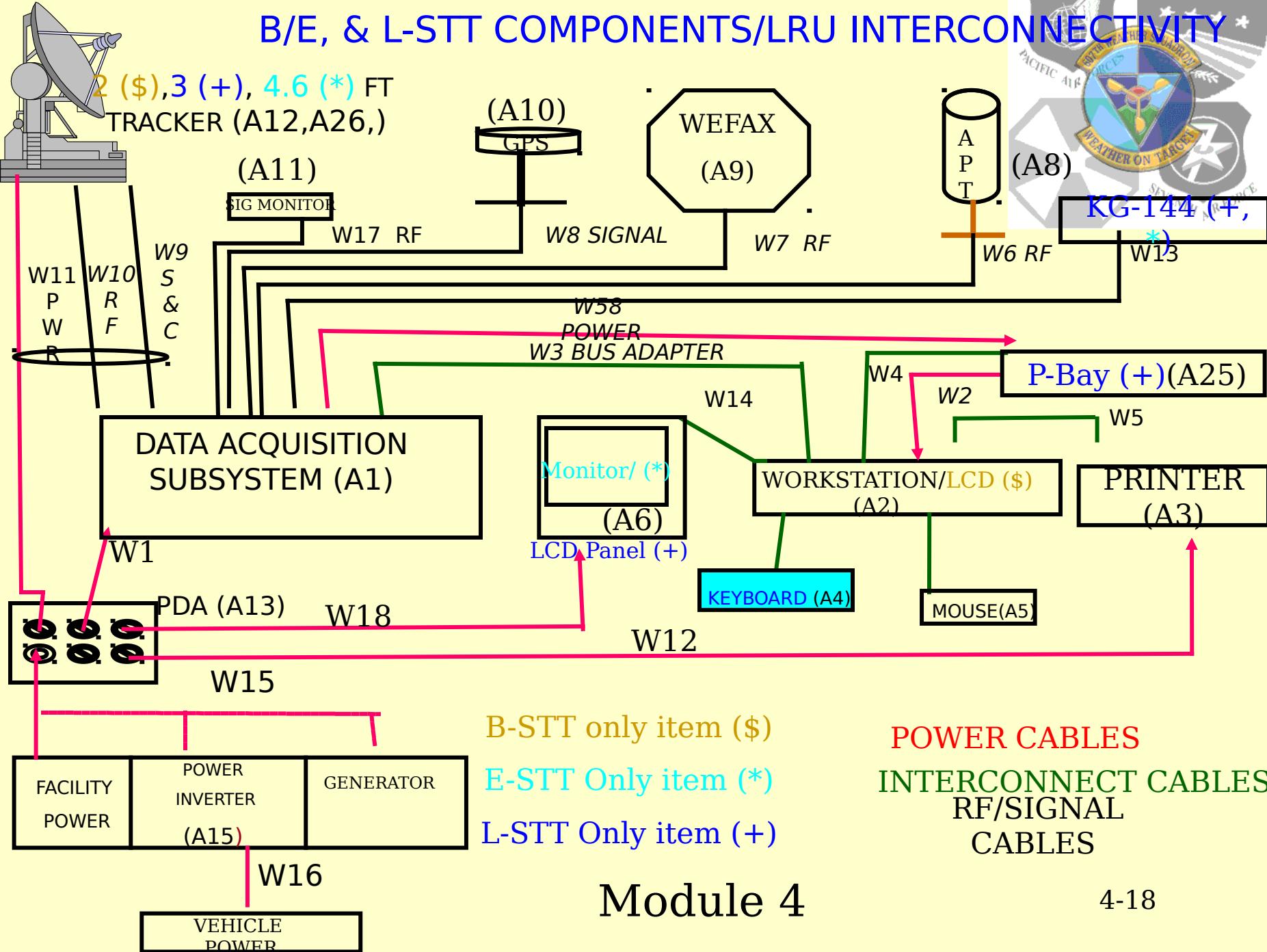




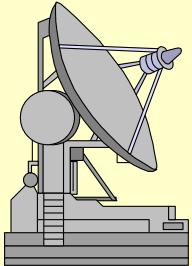
STT SYSTEM BLOCK DIAGRAM



B/E, & L-STT COMPONENTS/LRU INTERCONNECTIVITY



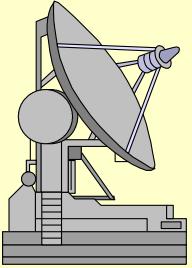
Module 4



LESSON 4.2 REVIEW



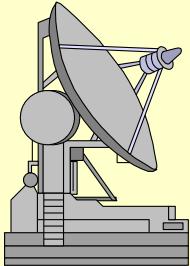
- This lesson covered STT:
 - Equipment Review
 - System Block Diagram
 - Inter-connectivity



LESSON TOPIC 4.3



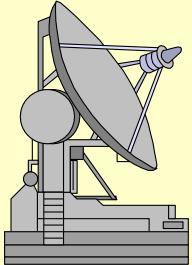
FAULT DETECTION & ISOLATION



LESSON 4.3 OVERVIEW



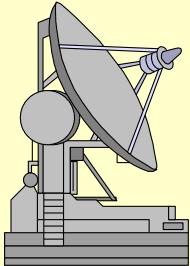
- This lesson will cover STT:
 - Fault isolation conventions
 - Hardware Status Check
 - RF/Antenna equipment group faults
 - COMSEC equipment group faults
 - Processing equipment group faults
 - Auxiliary equipment group faults



FAULT ISOLATION CONVENTIONS



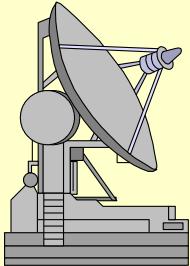
- Fault Isolation diagrams provide a logical flow for system checkout and are used to troubleshoot and isolate faults.
- Some conditions indicating a fault may not be associated with the STT components. Example: No ingest for a particular signal. This may be due to the satellite not operating.
 - The logic-tree is graphic in nature: symbols are used to direct maintenance actions.
 - Decision Diamond
 - Action Box
 - Off-page and On-page Connectors
 - Termination Step



HARDWARE STATUS CHECK



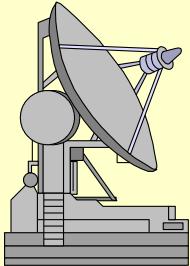
- Built-In-Test / Built-In-Test Equipment
 - Hardware Status tests are executed from either the Quicklook or System Manager windows.
 - GPS Functionality is accessible through the System Manager window.
 - Individual hardware elements may be tested.
 - All hardware elements can be tested simultaneously.
 - DMSP and HRPT share a Serial I/O card, Primary Decom and Demod/Bit Sync/Decoder. Testing those sets of devices may interfere with other on-going operations.



FAULT DETECTION & ISOLATION



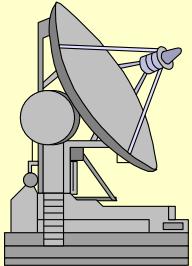
- The following slides will cover common faults with:
 - RF/Antenna Equipment Group
 - Processing Equipment Group
 - COMSEC Equipment Group
 - Auxiliary Equipment Group



COMMON RF/ANTENNA GROUP RELATED FAULTS



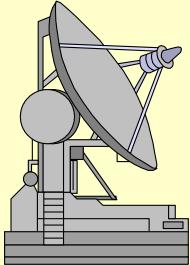
- Faults
 - No GPS Fix
 - Missing Passes
- Typical Actions
 - Check Cable Connections
 - Check STT Satellite Schedule
 - Verify Satellite Functioning (METSAT Status Report)
 - Check Ephemeris Data
 - Check COMSEC (DMSP)
 - Check Antenna Alignment (WEFAX/DMSP)



COMMON PROCESSOR GROUP RELATED FAULTS



- Faults
 - System does not boot (HD failure)
 - System does not respond to commands
- Actions
 - Always verify hardware vs software
 - » Log-out and log back in
 - » Shutdown and reboot system
 - » Reseat both HD's
 - Reload system software

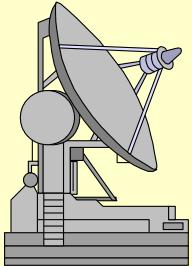


COMMON COMSEC GROUP RELATED FAULTS



- Fault
 - Cannot Key DTD
 - Cannot Transfer DTD key to MYK-7/KG-144

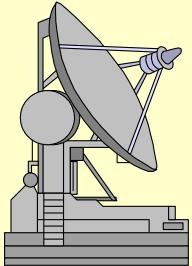
- ACTIONS
 - Check KOI-18/DTD Batteries
 - Check CIK
 - Check Fill Cable Connections
 - Verify Key Sequence (KEK/TEK)



COMMON AUXILIARY GROUP RELATED FAULTS



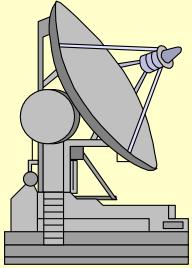
- Failure
 - System Shut Down
 - Printer Does Not Print
- Actions
 - Check power source
 - Check PDA
 - Check Power Cables
 - Reload software to restore printer



LESSON 4.3 REVIEW



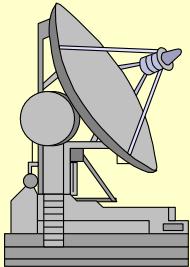
- This lesson covered STT:
 - Fault isolation conventions
 - Hardware Status Check
 - RF/Antenna equipment group faults
 - COMSEC equipment group faults
 - Processing equipment group faults
 - Auxiliary equipment group faults



LESSON 4.4



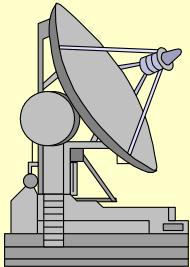
SUPPORT DOCUMENTATION



LESSON 4.4 OVERVIEW



- Use and Purpose of AFTO Form 95
- Electronic Set Inventory Checklist
- Maintenance Data Documentation
- AFTO Form 349
- Use of Illustrated Parts Breakdown
- Supply Requisition Procedures
 - AF Form 2005
- Quality Deficiency Reports
- Supply Turn-In Procedures
 - AFTO Form 350
 - DD Form 1577-2 or DD Form 1577-3



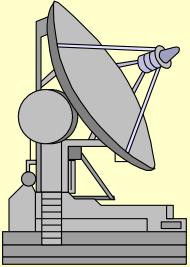
AFTO Form 95 (Historical Data)



- The AFTO Form 95 is used to document and maintain a permanent history of significant maintenance actions accomplished on Communications-Electronics equipment, i.e. STT.
- Its purpose is to provide the maintenance organization with a life profile of the item, and to portray those conditions which could have a bearing on future maintenance of the equipment.
- CAMS Screen 126 can be used in place of the AFTO Form 95. Data is recorded the same in CAMS as it is on the form.

SIGNIFICANT HISTORICAL DATA				PAGE 1 OF 2 PAGE
1. MISSION DESIGN SERIES/TYPE, MODEL AND SERIES AN/TMQ-43 SMALL TACTICAL TERMINAL		2. MANUFACTURER HARRIS CORP	3. SERIAL NUMBER BASIC: XX ENH: XX	4. ACCEPTANCE DATE 1 May 1998
DATE A	REMARKS B		ORGANIZATION C	
1 May 98	Items in this block should include: <ul style="list-style-type: none"> - All equipment serial numbers as initially installed. - Any Depot level or WSSC maintenance performed. - The installation or removal of any end item (DAS, Workstation, etc.). Always include serial numbers for R/R actions. - Any damage due to mishandling or major corrosion; include the extent of damage or corrosion and what has been done to solve the problem. - Any chronic maintenance problems which cause extended system downtime. - Time Compliance Technical Order (TCTO) actions. You must record the date the TCTO was received, and the date it was accomplished. - Finally, you must perform and document an annual review of the Historical Data to ensure it is accurate and current. 		WSSC	

Electronic Set Inventory Checklist



- AFTO FORM 47- series checklists
 - Serves as a convenient instrument for accounting of component items
 - Will be maintained as part of the equipment historical records
- AFTO FORM 470
 - Cover Page. Lists equipment type, model, national stock number
- AFTO FORM 471
 - Establishes formal accountability for all items of a C-E ground set
- AFTO FORM 472
 - Signature indicates that an inventory was accomplished, with any shortages listed on AFTO Form 471

ELECTRONIC SET INVENTORY CHECKLIST				1. DATE
2. SERIAL NUMBER	3. NATIONAL STOCK NUMBER	4. NOMENCLATURE (Module, Type and Model)	5. CONDITION	
Serial Number of Basic System	6660-01-413-6050	AN/TMQ-43 Weather Terminal Set	A	
COMMENTS				
<p>ASTERISK (*) ITEMS ARE MAJOR COMPONENTS NECESSARY FOR FIELD OPERATION. NON-ASTERISK ITEMS ARE ITEMS THAT MAY NOT BE NECESSARY FOR OPERATION OF THE SET, BUT ARE NECESSARY TO MAKE THE SET TECHNICAL ORDER COMPLETE.</p>				
LEGEND				
1, 2, 3, etc.				Indicates Major Assemblies.
A, B, C, etc.				Indicates breakdown of Major Assemblies.
AT, BT, CT, etc.				Used when Alphabet has been exceeded.
AA, BB, CC, etc.				Indicates breakdown within breakdowns.

ELECTRONIC SET INVENTORY CHECKLIST CONFIGURATION DATA

1 PAGE OF PAGE

2. NATIONAL STOCK NUMBER

6660-01-413-6050

3. NOMENCLATURE

AN/TMQ-43 Weather Terminal Set

4. SERIAL NUMBER

XXXXXX

NATIONAL STOCK NUMBER

A

NOMENCLATURE

B

TYPE NUMBER OR PART NUMBER

C

LINE NO

D

QTY SHIPPED

E

BOX NO

F

QTY RCVD

G

ITEM NO

H

5820-01-411-5591

Data Acquisition Subsystem

3007632-101 XD2 01

01

2. NATIONAL STOCK NUMBER

6660-01-413-6050

3. ATTACHED INVENTORY CHECK LIST COMPILED FROM

3. NOMENCLATURE

AN/TMQ-43 Weather Terminal Set

4. SERIAL NUMBER

XXXXXX

USEK

6. DISTRIBUTION (Check One)

COPY #1 SM/ALC/MM

OR ORGAN FILE

COPY #2 SM/ALC/MM OR AS DIRECTED

COPY #3 NUMBER 1 CONTAINER

SECTION I

MAINTENANCE (TRC) OR ORGANIZATIONAL TURN IN INFORMATION

7. ORGANIZATION

8. DOCUMENT NUMBER

9. CONDITION

10. SPECIAL INSTRUCTIONS

11. REMARKS

Section I is filled out by the maintenance activity or relinquishing activity prior to shipment

12. FWD/REL/MAINT/ORG CMDR

13. DATE

14. (TRC) ORITY CON SPEC/ORG MAINT OFF

15. DATE

16. SUPPLY CON INSPI/NC/C

17. DATE

SECTION II

PACKAGING AND PACKING INFORMATION

18. PACKED IN ACCORDANCE WITH

19. SPECIAL INSTRUCTIONS

20. REMARKS

Section II is filled out by packaging or packing activity

21. PACKAGING FOREMAN

22. DATE

23. PACKER

24. DATE

SECTION III

RECEIVING INFORMATION

25. ORGANIZATION

26. DOCUMENT NUMBER

27. CONDITION

28. SPECIAL INSTRUCTIONS

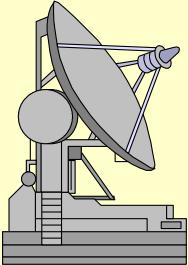
Section III is filled out by the receiving activity after conducting an inventory of the equipment

29. RECEIVED BY

31. DATE

32. SUPPLY ORITY CONTROL INSPI OR NC/C

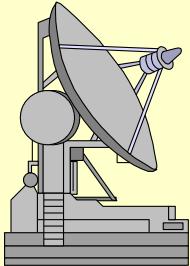
33. DATE



Maintenance Data Documentation



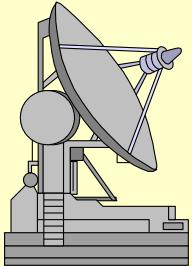
- MDD is a mandatory process governed by AFI 21-116 and T.O. 00-20-2.
- The objective of MDD is to collect and store maintenance data. Program managers use this data for such things as determining system effectiveness, reliability and spares availability. More importantly, it provides a database for future modifications and upgrades.
- MDD is accomplished for any maintenance action taken on the system (PMI's, repairs, etc.)
- Core Automated Maintenance System (CAMS) is the Air Force Standard for documenting equipment outages, scheduled maintenance, document maintenance actions, etc.



MAINTENANCE DATA DOCUMENTATION (MDD)

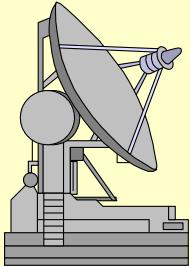


- AFTO Form 349
 - Purpose
 - Maintenance Job Example
 - PMI Example



AFTO FORM 349 PURPOSES

- Identifies reliability and maintainability problems
- Establishes priorities for product improvements /engineering changes
- Validates spares requirements
- System analysis results are only as accurate as data inputted. **If you do not take the effort to complete MDD, the above actions will not happen.**



INSTRUCTOR LED SCENERIO



- On 20 Jan 98, you deployed to field. You set up your STT. At 08:30 you missed a DMSP RTD pass. You troubleshooted and at 09:30 you isolated the problem to the DAS. From 09:45 until 11:30 hrs, you ordered a new DAS from Base Supply and removed failed DAS for supply turn-in. On 21 Jan 98 at 14:00 you received a new DAS. You installed the DAS, and at 16:30 you received a DMSP pass and closed out job.
- RELEVANT MDD INFORMATION
 - » **Job Control Number:** 80200001
 - » **Office Symbol:** YWEAT
 - » **STT Equipment ID:** RF102
 - » **STT SRD:** FAE
 - » **Man-Number:** 54321
- RELEVANT SUPPLY INFORMATION
 - » **Supply Account:** 295WX
 - » **Delivery Destination:** A88
 - » **PRI/UJC:** AE 03

MAINTENANCE DATA COLLECTION RECORD

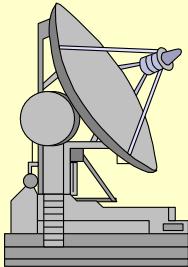
OMB NO.
0704-0186

1. JOB CONTROL NO.	2. WORKCENTER	3. I.D. NO./SERIAL NO.	4. MDS	5. SHD	6. TIME	7. PRI	8. SURVEY NO.	9. LOCATION						
80200001	YWEAT	RF102	FAE											
10. CUST. I.D.	11. ENGINE I.D.	12. INST. I.D.	13. INST. ENG. I.D.	14.	15.	16.	17. TIME APC SEQ	18. JOB STD.						
19. FSC	20. PART/LOT NUMBER	21. SER. NO./OPTR. TIME	22. TAG NO.	23. INST. ITEM PART NO.	24. SERIAL NUMBER	25. OPEN. TIME								
5820	3007632-101	XXXXXX	XXXXXX	3007632-101	XXXXXX									
ACT. LINE	A	B	C	D	E	F	G	H	I	J	K	L	M	N
	TYPE MAINT	COMP POS	WORK UNIT CODE	ACTION TAKER	WHEN DISC	HOW MTL	UNITS	START HOUR	STOP HOUR	CREW SIZE	CAT L48	CMD ACT ID	SCH CODE	AFSC/EMPLOYEE NUMBER
1	B		AA000	Y	C	255	01	0830	020	0930	2	1		54321
2	B		AAE00	P	C	255	01	0945	020	1130	2	1		54321
3	B		AAE00	Q	C	799	01	1400	021	1630	2	1		54321
4														
5														
26. DISCREPANCY														
NOT RECEIVING DMSP RDS DATA														
27. CORRECTIVE ACTION														
<ol style="list-style-type: none"> 1. TROUBLESHOT. FOUND DAS BAD 2. REMOVED DAS 3. INSTALLED DAS. SYSTEM OPERATIONAL 														
28. RECORDS ACTION														

MAINTENANCE DATA COLLECTION RECORD

OMB NO.
0704-0186

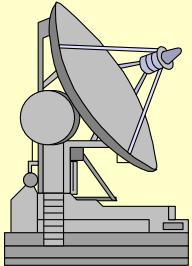
1. MR CONTROL NO. 9030A012	2. WORKCENTER YWEAT	3. I.D. NO./SERIAL NO. RF102	4. MDS	5. SHD FAE	6. TIME	7. PRI	8. SURVEY NO.	9. LOCATION						
10. ENG. TIME	11. ENGINE I.D.	12. INST. ENG. TIME	13. INST. ENG. I.D.	14.	15.	16.	17. TIME APC SEQ	18. JOB STD.						
19. FSC	20. PART/LOT NUMBER	21. SER. NO./OPR. TIME	22. TAG NO.	23. INST. ITEM PART NO.	24. SERIAL NUMBER	25. OPR. TIME								
ACTION LINE	A TYPE MAINT	B COMP POS	C WORK UNIT CODE	D ACTION TAKER	E WHEN DISC	F HOW MNL	G UNITS	H START HOUR	I STOP HOUR	J CREW SIZE	K CAT L48	L CMD ACT ID	M SCH CODE	N AFSC/EMPLOYEE NUMBER
1	F		03156				01	0900	030	0920	2	1		04764
2														
3														
4														
5														
26. DISCREPANCY														
56 DAY PMI														
27. CORRECTIVE ACTION														
COMPLETED PMI														
													28. RECORDS ACTION	



STUDENT SELF-PACED SCENERIO



- On 24 Jan 98, you are at the weather station, where your STT is set-up in garrison. At 08:00, you check the STT and find a red indicator on your Omni icon. You troubleshoot and at 09:00 isolated the problem to the APT antenna. From 09:15 until 11:00, you ordered a new antenna from Base Supply and removed the failed antenna for turn-in to base supply. On 26 Jan 98 at 08:00 you received a new antenna. You installed the antenna and at 10:30 you received an APT image and closed out the job.
- RELEVANT MDD INFORMATION
 - » **Job Control Number:** 80240001
 - » **Office Symbol:** YWEAT
 - » **STT Equipment ID:** RF102
 - » **STT SRD:** FAE
 - » **Man-Number:** 54321
- RELEVANT SUPPLY INFORMATION
 - » **Supply Account:** 295WX
 - » **Delivery Destination:** A88
 - » **PRI/UJC:** AE 03
 - » **Part Number:** 3008970-101
 - » **National Stock Number:** 5985-01-411-1280



PRACTICE AFTO 349

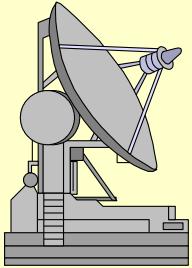


- Complete a practice AFTO 349 using student self paced scenario on slide 4-44
- Hold, Answers on next Screen

MAINTENANCE DATA COLLECTION RECORD

OMB NO.
0704-0186

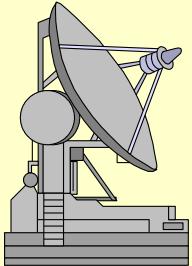
1. JOB CONTROL NO.	2. WORKCENTER	3. I.D. NO./SERIAL NO.	4. MDS	5. SNO	6. TIME		7. PRI	8. SURVEY NO.	9. LOCATION						
80240001	YWEAT	RF102	FAE												
10. ACTV. TIME	11. ENGINE I.D.	12. INST. ENG. TIME	13. INST. ENG. I.D.	14.	15.	16.	17. TIME APT. SEQ	18. JOB STD.							
19. FSC	20. WORK UNIT CODE	21. ACT. DA/START TIME	22. TIP DA	23. ACT. ITEM DESC ID	24. SERIAL NUMBER		25. OPEN TIME								
ACTION	TYPE MAINT	COMP POS	WORK UNIT CODE	ACTION TAKER	WHEN DISC	HOW MTL	UNITS	START HOUR	DAY	STOP HOUR	CREW SIZE	CAT L48	CMD ACT ID	SCH CODE	AFSC/EMPLOYEE NUMBER
1	B		AA000	Y	C	255	01	0800	024	0900	2	1			56434
2	B		AAC00	P	C	255	01	0915	024	1100	2	1			56434
3	B		AAC00	Q	C	799	01	0800	026	1030	2	1			56434
4															
5															
26. DISCREPANCY															
NOT RECEIVING APT Data															
27. CORRECTIVE ACTION															
<ol style="list-style-type: none"> 1. TROUBLESHOT. FOUND APT ANT BAD 2. REMOVED APT ANT 3. INSTALLED ANT. SYSTEM OPERATIONAL 															
28. RECORDS ACTION															



USE OF ILLUSTRATED PARTS BREAKDOWN (IPB)



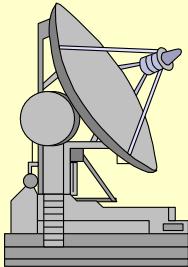
- Locate LRUs in IPB
- Identify sources of repair in IPB
- Identify Part Number



SUPPLY PROCEDURES



- Supply Requisition Procedures
 - » AF Form 2005 Example
- Supply Turn-In Procedures
 - AFTO Form 350 Example
 - DD Form 1577-2 or DD Form 1577-3 Example

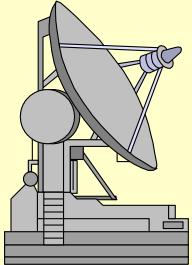


AF FORM 2005

INSTRUCTOR LED



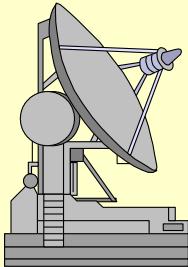
ISSUE/TURN-IN REQUEST	TRIC		CALL SIGN		A. INCHIEFER, NAME, DATE (TIME)		B. INSPECTOR, NAME-Stamp, DATE (TIME)														
	1	2	3	4	5	6	7														
	ISU	A88	SSGT JOHN DOE 884-8143																		
	STOCK NUMBER		UNIT OF ISSUE		QUANTITY		C. DOCUMENT NUMBER														
	NSC	NUIN	ADDN	ISSUE	21	22	23	24	25	26	27	28	29	ACT	ORG	SHOP	DATE	SER. NO.	ITEM		
	5	8	2	0	1	4	1	1	5	5	9	1	EA	0001	X	295	WX	8020	0014	R	
	PART NUMBER				D. T.O. REFERENCE/TECHNICAL PUBLICATION OR END-ITEM APPLICATION/NEXT HIGHER ASSMBLY		E. T.O. 31M3-2TMQ43-4 FIG 1, INDEX 3														
	D. PART NUMBER/WGFA CODE OR NAME/DESCRIPTION																				
	3007632-101																				
	WORK ORDER		ITEM		SD	PROJECT	PR	ROUTINE	DUC		MARK FOR		F. T.O. PNC AND/OR ERPC								
SHIP TO		51	51	54	55	56	57	58	59	60	61	61	62	63	64	65	66	67	68		
45	46	47	48	49	50	52	53														
G. TIME & DATE OF DELIVERY		H. DELIVERY TIME		I.		J. NOMENCLATURE															
						DATA AQUISTION SUBSYSTEM															
AF Form 2005, JUN 86 PREVIOUS EDITION WILL BE USED																					



2005 PRACTICE EXERCISE



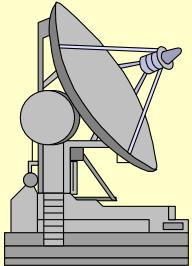
- Complete practice exercise AF 2005 using student self paced scenario on slide 4-44
- Hold, answers on next screen



AF FORM 2005 STUDENT SELF PACED



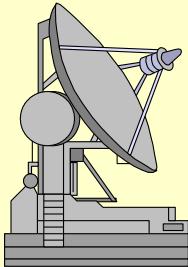
ISSUE/TURN-IN REQUEST	TRIC	CALL SIGN	IN	A. INCHIEFER, NAME, DATE (TIME)		B. INSPECTOR, NAME-Stamp, DATE (TIME)							
	1 2 3	4 5 6	7	SSGT JOHN DOE 884-8143									
	ISU A88												
	STOCK NUMBER			UNIT OF ISSUE	QUANTITY	C.		DOCUMENT NUMBER	ITEM				
	NSC	MIN	ADDN	ISSUE	QUANTITY			ACT	ORG	SHOP	DATE	SER. NO.	ITEM
	8 9 10 11	12 13 14 15 16 17 18 19 20	21 22	23 24	25 26 27 28 29			30	31 32 33	34 35	36 37 38 39	40 41 42 43	44
	5985 01-411-1280			EA	0001			X 295	WX	8024	0001	R	
	PART NUMBER			E. T.O. REFERENCE/TECHNICAL PUBLICATION OR END-ITEM APPLICATION/NEXT HIGHER ASSMBLY		T.O. 31M3-2TMQ43-4 FIG 1, INDEX 13							
	D. PART NUMBER/NGFA CODE OR NAME/DESCRIPTION 300-8970-101												
	WORK ORDER		ITEM	SD	PROJECT	PR	ROUTINE	UJC	MARK FOR		F. T.O. PNC AND/OR ERPC		
SHIP TO		51 52	54 55 56	57 58 59	60 61	62	63 64	65 66	67 68	69 70	71 72	73 74	75 76
45 46 47 48 49 50		52 53											
G. TIME & DATE OF DELIVERY		H. DELIVERY TIME		I.		J. NOMENCLATURE		APT Antenna					
AF Form 2005, JUN 86 PREVIOUS EDITION WILL BE USED													



DEFICIENCY REPORTS



- There are two type of deficiency reports
- Quality Deficiency Reports
 - ⇒ Purpose: Identify and assist in trend analysis of warranty components and/or items received from Supply System
 - Hardware/Software improvements
- Material Deficiency Report
 - Purpose: Identify and assist in trend analysis of components out of warranty and/or items received from Supply System
- The following form is applicable to both QDRs and MDRs



DEFICIENCY REPORTS (1 of 5)



Material Deficiency Report Format Example

1. **From: Your Organization** **31 CCS/CYWW**

2. **TO: Your POC for DRs that have access to the D021 Data Base**

Alias for your POC: Screening Point Office, Quality Assurance, Quality Control (Base Level),

Certifying Official for DRs

Info:

Subject: **Category II QDR** **X** *Cat I is for situations that could only lead to loss of life*

3. **REPORT CONTROL NUMBER (RCN):** *Assigned by Screening Point*

4. **DATE DEFICIENCY DISCOVERED:** **21 Jan 98**

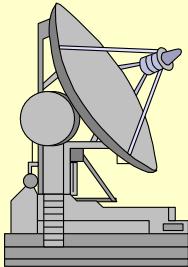
5. **NATIONAL STOCK NUMBER:** **5820 - 01-411-5591**

6. **NOMENCLATURE:** *Enter the name of the broken LRU* **Data Acquisition Subsystem**

7. a. **MANUFACTURER:** *Harris Corp.*

b. **MANUFACTURER'S CODE:** **64755** *AF assigned number for the SIT*

c. **SOURCE OF REPAIR/OVERHAUL:** *N/A*



DEFICIENCY REPORTS (2 of 5)

8. MANUFACTURER'S PART NUMBER: *Listed in TO 31MB-2TMQ43-04 IPB* **3007632-101**

9. SERIAL, LOT, BATCH NUMBER: N/A

10. a. CONTRACT NUMBER: F04701-94-C00019 *AF contract number for the STT*

b. PURCHASE ORDER NUMBER: N/A

c. REQUESITION NUMBER: N/A

d. GBL NUMBER: N/A

11. NEW/REPAIRED/OVERHAULED: New

12. DATE MANUFACTURED, REPAIRED OR OVERHAULED: *System Delivery Date* **1 Dec 97**

13. OPERATING TIME AT FAILURE: *Date of failure minus System Delivery Date* **51 Days**

14. GOVERNMENT FURNISHED MATERIAL: N/A

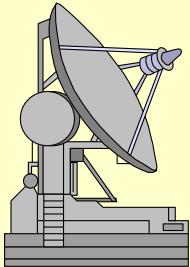
15. QUANTITY:

a. RECEIVED: 01

b. INSPECTED: 01

c. DEFICIENT: 01

d. IN STOCK: 00



DEFICIENCY REPORTS (3 of 5)

16. DEFICIENT ITEM WORKS ON OR WITH:

a. END ITEM: AN/TMQ-43 Small Tactical Terminal (STT)

b. NEXT HIGHER ASSEMBLY: *Listed in TO 31MB-2TMQ43-06* AN/TMQ-43

17. DOLLAR VALUE: *Found in Fed Log Database or call STT Depot*

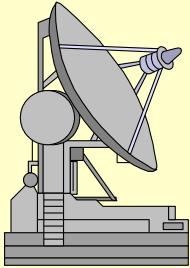
18. ESTIMATED CORRECTION COST: Unknown

19. a. ITEM UNDER WARRANTY: Yes

b. EXPIRATION DATE: *One year from delivery date* 1 Dec 98

20. WORK UNIT CODE: *Listed in TO 31MB-2TMQ43-06* AAE00

21. EXHIBIT DISPOSITION INFORMATION: Shipped IAW Warranty



DEFICIENCY REPORTS (4 of 5)

22. DETAILS:

a. CIRCUMSTANCES PRIOR TO DIFFICULTY **Initial Set-up upon Deployment**

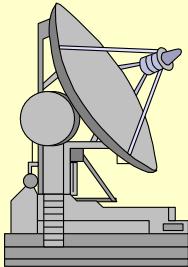
b. DESCRIPTION AND CAUSE OF DIFFICULTY **No RDS Reception**

c. ACTION TAKEN AND/OR RECOMMENDED:

Troubleshoot, Verified Problem with WSSC

d. TECHNICAL INFORMATION **None**

e. TECHNICAL DATA DEFICIENCY: **Not Applicable**



DEFICIENCY REPORTS (5 of 5)

f. SUPPORT DATA MAILED: NONE

g. SYSTEM PROGRAM MANAGER OR ITEM MANAGER ALC CODE: FH

h. STANDARD REPORTING DESIGNATOR (SRD): FAE *Same for all STTs*

i. COMMAND CODE: PACAF: OR, AMC: 1L, ACC: 1C, USAFE: 0D, AETC: 0J,

j. OTHER PERTINENT DATA:

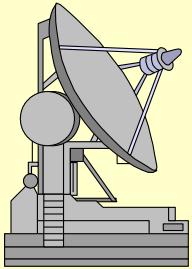
1. DR EXHIBIT HOLDING ACTIVITY: _____

2. PERTINENT DATA: _____

3. PHOTOGRAPHIC SUPPLIES: _____

k. COGNIZANT OFFICIAL: Screening Point official, Name, Number, etc.

l. CERTIFYING OFFICIAL: Name, Number, etc.



5820-01-411-5591

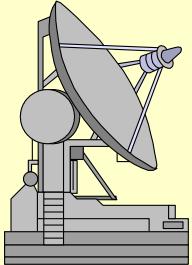
FSN, PART NO. AND ITEM DESCRIPTION		SUSPENDED TAG - MATERIEL	
3007632-101		NEXT INSPECTION DUE	CONDITION CODE Q
DATA AQUISITION SUBSYSTEM EA		INSPECTION ACTIVITY	31 CCS/CYWW
SERIAL NO./LOT NO.	UNIT OF ISSUE	REASON OR AUTHORITY	Applicable NRTS code
500	EA	From WUC Manual	
CONTRACT OR PURCHASE ORDER NO.	QUANTITY	INSPECTOR'S NAME OR STAMP AND DATE	
	0 1	SSgt Doe, 21 Jan 98	
REMARKS NO RDS RECEIVE			

WARNING: Unauthorized persons removing, defacing, or destroying this tag may be subject to a fine of not more than \$1,000 or imprisonment for not more than one year or both. (18 USC 1381)

DD FORM 1575, 1 OCT 66

Also, in addition to the QDR paperwork we just accomplished, we must fill out a DD Form 1575 (Brown Tag) and attach it to the part you are turning in.

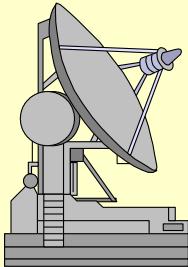
NOTE: Condition Code is Q for QDR.



DR PRACTICE



- Complete practice DR & DD 1575 using student self paced scenario on slide 4-44
- Hold, answers on next screen



DEFICIENCY REPORTS (1 of 5)



Material Deficiency Report Format Example

1. **From:** Your Organization

2. **TO:** Your POC for DRs that have access to the D021 Data Base

Alias for your POC: Screening Point Office, Quality Assurance, Quality Control (Base Level),

Certifying Official for DRs

Info:

Subject: **Category II QDR X** *Cat I is for situations that could only lead to loss of life*

3. **REPORT CONTROL NUMBER (RCN):** *Assigned by Screening Point*

4. **DATE DEFICIENCY DISCOVERED:**

5985-01-411-

5. **NATIONAL STOCK NUMBER:**

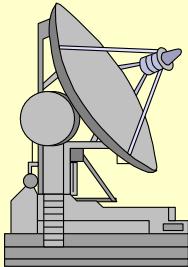
1280

6. **NOMENCLATURE:** *Enter the name of the broken LRU* **APT Antenna**

7. a. **MANUFACTURER:** *Harris Corp.*

b. **MANUFACTURER'S CODE:** *64755 AF assigned number for the SIT*

c. **SOURCE OF REPAIR/OVERHAUL:** *N/A*



DEFICIENCY REPORTS (2 of 5)

8. MANUFACTURER'S PART NUMBER: *Listed in TO 31MB-2TMQ43-04 IPB* 3007632-101

9. SERIAL, LOT, BATCH NUMBER: N/A

10. a. CONTRACT NUMBER: F04701-94-C00019 *AF contract number for the STT*

b. PURCHASE ORDER NUMBER: N/A

c. REQUESITION NUMBER: N/A

d. GBL NUMBER: N/A

11. NEW/REPAIRED/OVERHAULED: New

12. DATE MANUFACTURED, REPAIRED OR OVERHAULED: *System Delivery Date* 01 Jan 98

13. OPERATING TIME AT FAILURE: *Date of failure minus System Delivery Date* 23 Days

14. GOVERNMENT FURNISHED MATERIAL: N/A

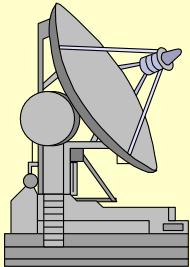
15. QUANTITY:

a. RECEIVED: 01

b. INSPECTED: 01

c. DEFICIENT: 01

d. IN STOCK: 00



DEFICIENCY REPORTS (3 of 5)

16. DEFICIENT ITEM WORKS ON OR WITH:

a. END ITEM: AN/TMQ-43 Small Tactical Terminal (STT)

AN/TMQ-43

b. NEXT HIGHER ASSEMBLY: *Listed in TO 31MB-2TMQ43-06*

17. DOLLAR VALUE: *Found in Fed Log Database or call STT Depot*

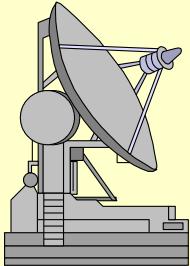
18. ESTIMATED CORRECTION COST: Unknown

a. ITEM UNDER WARRANTY: Yes

b. EXPIRATION DATE: *One year from delivery date* 1 Jan 99

20. WORK UNIT CODE: *Listed in TO 31MB-2TMQ43-06* AAC00

21. EXHIBIT DISPOSITION INFORMATION: *Shipped IAW Warranty*



DEFICIENCY REPORTS (4 of 5)

22 DETAILS:

a. CIRCUMSTANCES PRIOR TO DIFFICULTY: _____

Operational

b. DESCRIPTION AND CAUSE OF DIFFICULTY: _____

No APT RCV

c. ACTION TAKEN AND/OR RECOMMENDED: _____

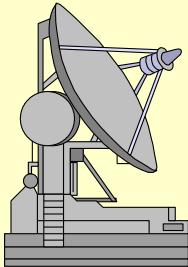
Trouble shot, Verified W/
WSSC West, NRTS 1

d. TECHNICAL INFORMATION: _____

None

e. TECHNICAL DATA DEFICIENCY: _____

N/A



DEFICIENCY REPORTS (5 of 5)

f. SUPPORT DATA MAILED: NONE

g. SYSTEM PROGRAM MANAGER OR ITEM MANAGER ALC CODE: FH

h. STANDARD REPORTING DESIGNATOR (SRD): FAE Same for all STTs

i. COMMAND CODE: PACAF: OR, AMC: 1L, ACC: 1C, USAFE: 0D, AETC: OJ

j. OTHER PERTINENT DATA:

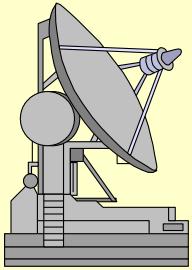
1. DR EXHIBIT HOLDING ACTIVITY: _____

2. PERTINENT DATA: _____

3. PHOTOGRAPHIC SUPPLIES: _____

k. COGNIZANT OFFICIAL: _____ Your Name & Number as Screening Official

l. CERTIFYING OFFICIAL: _____ Name & Number of person inputting DR into system



5985-01-411-1280

FSN, PART NO. AND ITEM DESCRIPTION

3008970-101

WARNING: Unauthorized persons removing, defacing, or destroying this tag may be subject to a fine of not more than \$1,000 or imprisonment for not more than one year or both. (18 USC 1381)

SUSPENDED TAG - MATERIEL	
NEXT INSPECTION DUE	CONDITION CODE Q
INSPECTION ACTIVITY 31 CCS/CYWW	
REASON OR AUTHORITY Applicable NRTS code	
SERIAL NO. 001	UNIT OF LINE EA
CONTRACT OR PURCHASE ORDER NO.	QUANTITY 0
REMARKS From WUC Manual	
INSPECTOR'S NAME OR STAMP AND DATE SSgt Doe, 21 Jan 98	

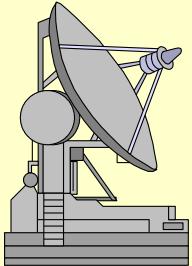
NO APT RECEIVE

DD FORM 1575, 1 OCT 66

Also

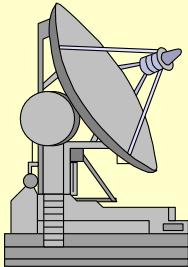
Also, in addition to the QDR paperwork we just accomplished, we must fill out a DD Form 1575 (Brown Tag) and attach it to the part you are turning in.

NOTE: Condition Code is Q for QDR.



SUPPLY TURN-IN PROCEDURES

- Reparable items must be turned in to base supply or Army counterpart
- The following forms must be filled out and turned in with item
 - AFTO 350
 - DD-1577 XX Condition Tag

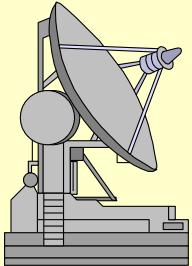


AFTO 350 (FRONT)

AFTO FORM 350 JAN 93		PREVIOUS EDITION WILL BE USED OMB NO. 0704-0188	
REPARABLE ITEM		PROCESSING TAG	
<p>Public reporting burden for this collection of information is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data source, gathering and maintaining the data needed, completing and reviewing the collection of information. Send comments regarding this burden estimate to any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Processing, 1215 Jefferson Highway, Suite 122, Arlington, VA 22202-4322, or to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington D.C. 20503. PLEASE DO NOT RETURN your form/questionnaire to either of these addresses. Send your completed form/questionnaire to: Prime Weapon System/End Item ALC Material Utilization and Control Office (MUCO).</p>			
1. JOB CONTROL NO.	2. ID/SERIAL NO.	3. TM	4. WHEN DISC
80200001	RF102	B FAE	C
5. HOW MAIL	6. MDS	7. WORK UNIT CODE	8. ITEM OPER TIME
255		AAE00	01
10. FSC	11. PART/LOT NUMBER	12. SERIAL NUMBER	
5820	3007632-101	001	
14. DISCREPANCY			
NOT RECEIVING RDS DATA			
15. SHOP USE ONLY			
SSGT DOE, 884-8143			
15A. DMC/ACT ID	15B. SHOP ACTION TAKEN		
TAG NO.		AFTO 350 PT.I	
770384			
16. SUPPLY DOCUMENT NUMBER			
X295WX80200014R			
17. HOME/MAIL ADDRESS			
DATA ACQUISITION SUBSYSTEM			
18. NSN		18A. ITEM CODE	
3007632-101		AAE00	
19. NSK		20. RPC USE ONLY	
P		01	
TAG NUMBER		AFTO 350 PT.II	
770384			

AFTO 350 (BACK)

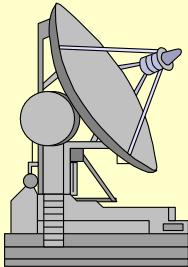
WARNING Unauthorized persons removing, destroying, or defacing this tag (or label) may be subject to a fine of not more than \$1,000 or imprisonment for not more than one year or both. (18 USC 138 1)			
REPAIR CYCLE DATA			
23. NSN	24. GRAN CODE		
5820-01-411-5591			
25. TRANSPORTATION CONTROL NUMBER			
26. SERVICEABLE			
27. CONDEMNED			
28. SUPPLY INSPECTOR'S STAMP			
29. BASE REPAIR CYCLE DATA			
DATE REMOVED	YR	JULIAN DATE	TIME
			AMM
TO:			
TO:			AWP
TO:			
TO:			
DATE COMPLETED			



AFTO 350 PRACTICE EXERCISE



- Complete a practice AFTO 350 using student self paced scenario on slide 4-44
- Hold, answers on next screen

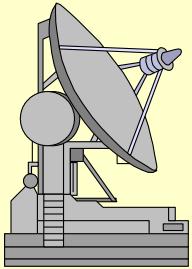


AFTO 350 (FRONT)

AFTO FORM 350 JAN 93		PREVIOUS EDITION WILL BE USED OMB NO. 0704-0188	
REPARABLE ITEM		PROCESSING TAG	
<p>Public reporting burden for this collection of information is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data source, gathering and maintaining the data needed, completing and reviewing the collection of information. Send comments regarding this burden estimate to any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Processing, 1215 Jefferson Highway, Suite 122, Arlington, VA 22202-4302, or to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington D.C. 20503. PLEASE DO NOT RETURN your form/questionnaire to either of these addresses. Send your completed form/questionnaire to: Prime Weapon System/End Item ALC Material Utilization and Control Office (MUCO).</p>			
1. JOB CONTROL NO. 80240001	2. ID/SERIAL NO. RF102	3. TM B FAE	4. WHEN DISC C
5. HOW MAIL 255	6. MDS AAC00	7. WORK UNIT CODE 01	8. ITEM OPER TIME 01
10. FSC 5985	11. PART/LOT NUMBER 3008970-101		
12. SERIAL NUMBER 001	13. SUPPLY DOCUMENT NUMBER X295WX80240001R		
14. DISCREPANCY NOT RECEIVING APT DATA			
15. SHOP USE ONLY SSGT DOE, 884-8143			
15A. DMC/ACT ID	15B. SHOP ACTION TAKEN		
TAG NO. 770384		AFTO 350 PT.I	
16. SUPPLY DOCUMENT NUMBER X295WX80240001R			
17. NOMENCLATURE APT ANTENNA			
18. FSC 3008970-101		18A. MDS AAC00	
19. NSK 5985-01-411-1280			
20. ACTION TAKEN P	21. CITY 01	22. RPC USE ONLY	
TAG NUMBER 770384		AFTO 350 PT.II	

AFTO 350 (BACK)

WARNING Unauthorized persons removing, destroying, or defacing this tag (or label) may be subject to a fine of not more than \$1,000 or imprisonment for not more than one year or both. (18 USC 138 1)				
REPAIR CYCLE DATA				
23. NSK 5985-01-411-1280	24. SRN CODE			
25. TRANSPORTATION CONTROL NUMBER				
26. SERVICEABLE				
27. CONDEMNED				
28. SUPPLY INSPECTOR'S STAMP				
29. BASE REPAIR CYCLE DATA		YR	JULIAN DATE	TIME
DATE REMOVED	RECD BY RPC			AMM
TO:				
TO:				AWP
TO:				
TO:				
DATE COMPLETED				

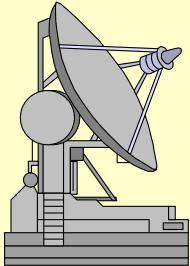


DD 1577-3 REPARABLE TAG



INSTRUCTIONS: Directives concerning returning, delivering, or repairing the tag may be subject to a law or not more than one year. (16 USC 1366)		FSN, PART NO. AND ITEM DESCRIPTION	
		5820-01-411-5591 3007632-101 DATA AQUISTION SUBSYSTEM	
SERIAL NO./LOT NO.		UNIT OF ISSUE	
001		EA	
CONTRACT OR PURCHASE ORDER NO.		QUANTITY	
		01	
REMARKS		REMOVED FROM	
		AN/TMQ-43	
INSPECTOR'S NAME OR STAMP AND DATE		SSGT DOE, 21 Jan 98	
DATA AQUISTION SUBSYSTEM BAD NO RDS RECEIVE			

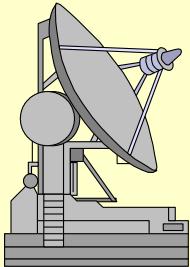
DD FORM 1 1577-2 1 OCT 68



DD 1577-3 PRACTICE EXERCISE



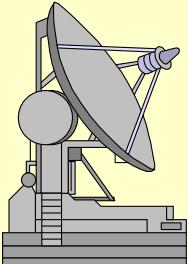
- Complete practice DD 1577-3 using student self paced scenario on slide 4-44
- Hold, answers on next screen



DD 1577-3 REPARABLE TAG STUDENT SELF-PACED



INSTRUCTIONS: Complete, sign, and return to your commanding officer or to a line of not more than one year from the date of issue. Copying of this tag may be subject to a fine of not more than \$1,000 or imprisonment for not more than one year (18 USC 1506).		DD FORM 1 1577-3 1 OCT 68	
ITEM NUMBER 5985-01-411-1280 3008970-101 APT Antenna		UNSERVICEABLE (REPARABLE) TAG-MATERIEL	
FSM, PART NO. AND ITEM DESCRIPTION		INSPECTION ACTIVITY 31 CCS/CYWW	CONDITION CODE F
REASON FOR REPARABLE CONDITION NRTS 1			
SERIAL NO./LOT NO. 001		UNIT OF ISSUE EA	REMOVED FROM AN/TMQ-43
CONTRACT OR PURCHASE ORDER NO.		QUANTITY 01	INSPECTOR'S NAME OR STAMP AND DATE SSGT DOE, 25 Jan 98
REMARKS APT Antenna BAD NO APT RECEIVE			

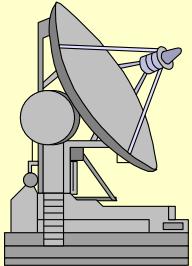


LESSON 4.4 REVIEW



■ This lesson covered:

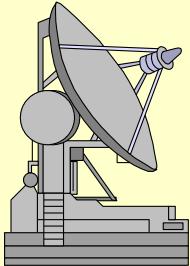
- Use and Purpose of AFTO Form 95
- Electronic Set Inventory Checklist
- Maintenance Data Documentation
- AFTO Form 349
- Use of Illustrated Parts Breakdown
- Supply Requisition Procedures
 - ⇒ AF Form 2005
- Deficiency Reports & DD Form 1575
- Supply Turn-In Procedures
 - ⇒ AFTO Form 350
 - ⇒ DD Form 1577-2 or DD Form 1577-3



LESSON PLAN 4.5



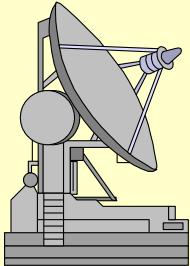
STT PREVENTIVE MAINTENANCE INSPECTIONS



LESSON 4.5 OVERVIEW



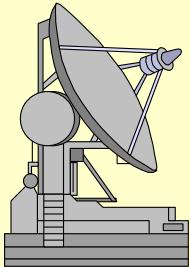
- This lesson topic will cover Preventative Maintenance on the STT:
 - Workstation
 - DAS
 - Printer
 - Monitor



WORK STATION PMIs



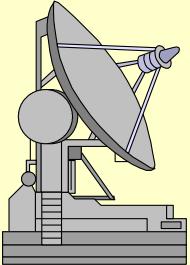
- Scheduled/Periodic Inspections/Maintenance
 - Workstation Air Filters - 4, 2 on each side panel
 - » Frequency of Performance -
 - » 180 days in a controlled, indoor/air conditioned environment.
 - » 30 days in normal outdoor environment.
 - » 7 days in a desert/dust environment.
 - » Special Inspections/Maintenance
 - Workstation Battery Backup System
 - » Frequency of Performance - after 6 months in storage
- On-condition Inspections/Maintenance
 - Display Screen Cleaning
 - » Frequency of Performance - As necessary



DAS PMIs



- Scheduled/Periodic Inspections/Maintenance
 - DAS Filters - 2
 - Frequency of Performance -
 - »180 days in a controlled, indoor/air conditioned environment.
 - »30 days in a normal outdoor environment.
 - »7 days in a desert/dust environment.
 - DAT Drive Cleaning
 - Frequency of Performance - Every 60 days
- On-condition Inspections/Maintenance
 - DAT Drive Cleaning
 - »Frequency of Performance - As necessary

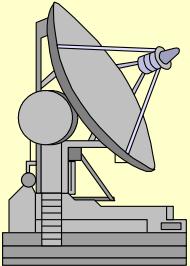


PRINTER PMIs



■ Preventive Maintenance

- Visual Inspection as required.
- Clean and Service Printer
- Frequency of Performance - After each roll of paper
- Printer Head and Darkness Adjustment (Work Card 2-004). Frequency of Performance - As necessary

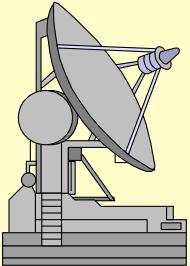


MONITOR PMIs



- Preventive Maintenance
 - » Visual Inspection as required.
 - » Display Screen Cleaning

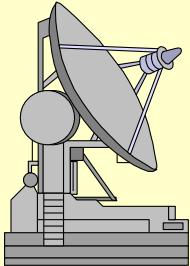
- On-condition Inspections/Maintenance
 - Display Screen Cleaning
 - » Frequency of Performance - As necessary



LESSON 4.5 REVIEW



- This lesson topic has covered STT PMIs on the:
 - Workstation
 - DAS
 - Printer
 - Monitor

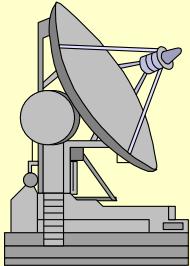


LESSON 4.6 LOGISTICS PRACTICAL EXERCISES



- Using instructor fault isolation scenario's & injected faults the student will be perform:
 - Fault detection
 - Fault Isolation
 - Completing MDC
 - Ordering Parts/supply documentation
 - Removing failed components
 - Replacement of failed component

- Complete Fault Isolation Scenario's



MODULE 4 REVIEW



- During this module we covered:
 - STT Maintenance Concepts
 - HW/SW data flow
 - Use of systems manuals
 - Fault detection and fault isolation
 - PMIs
 - Completing Support Documentation
 - Practical demonstration
- Questions?